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NEWS 3	Oct 27	New Extraction Code PAX now available in Derwent Files
NEWS 4	Oct 27	SET ABBREVIATIONS and SET PLURALS extended in Derwent World Patents Index files
NEWS 5	Oct 27	Patent Assignee Code Dictionary now available in Derwent Patent Files
NEWS 6	Oct 27	Plasdoc Key Serials Dictionary and Echoing added to Derwent Subscriber Files WPIDS and WPIX
NEWS 7	Nov 29	Derwent announces further increase in updates for DWPI
NEWS 8	Dec 5	French Multi-Disciplinary Database PASCAL Now on STN
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NEWS 10	Dec 15	2001 STN Pricing
NEWS 11	Dec 17	Merged CEABA-VTB for chemical engineering and biotechnology
NEWS 12	Dec 17	Corrosion Abstracts on STN
NEWS 13	Dec 17	SYNTHLINE from Prous Science now available on STN
NEWS 14	Dec 17	The CA Lexicon available in the CAPLUS and CA files
NEWS 15	Jan 05	AIDSLINE is being removed from STN
NEWS 16	Feb 06	Engineering Information Encompass files have new names
NEWS 17	Feb 16	TOXLINE no longer being updated

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=> s ((Adenovir? near3 subgroup B) or Ad16 or Ad-16 or Ad 16 or AD16 or AD-16 or AD 16) same fiber
MISSING OPERATOR 16) SAME
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nested terms that are not separated by a logical operator.

=> s ((Adenovir? near3 subgroup B) or Ad16 or Ad-16 or Ad 16 or AD16 or AD-16 or AD 16) (L) fiber
L1 10 ((ADENOVIR? NEAR3 SUBGROUP B) OR AD16 OR AD-16 OR AD 16 OR AD16
OR AD-16 OR AD 16) (L) FIBER

=>

=> d ibib abs l1 1-10

L1 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:205186 CAPLUS
TITLE: Improved adenovirus vectors for infection of cardiovascular tissues
AUTHOR(S): Havenga, M. J. E.; Lemckert, A. A. C.; Grimbergen, J. M.; Vogels, R.; Huisman, L. G. M.; Valerio, D.; Bout, A.; Quax, P. H. A.
CORPORATE SOURCE: Crucell Holland B.V., Leiden, 2301 CA, Neth.
SOURCE: J. Virol. (2001), 75(7), 3335-3342
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To identify improved adenovirus vectors for cardiovascular gene therapy, a library of adenovirus vectors based on adenovirus serotype 5 (Ad5) but carrying **fiber** mols. of other human serotypes, was generated. This library was tested for efficiency of infection of human primary vascular endothelial cells (ECs) and smooth muscle cells (SMCs). Based on luciferase, LacZ, or green fluorescent protein (GFP) marker gene

expression, several **fiber** chimeric vectors were identified that displayed improved infection of these cell types. One of the viruses that performed particularly well is an Ad5 carrying the **fiber** of **Ad16** (Ad5.Fib16), a subgroup B virus. This virus showed, on av., 8- and 64-fold-increased luciferase activities on umbilical vein ECs and SMCs, resp., compared to the parent vector. GFP and lacZ markers showed that approx. 3-fold (ECs) and 10-fold (SMCs) more cells were transduced. Expts. performed with both cultured SMCs and organ cultures derived from different vascular origins (saphenous vein, iliac artery, left interior mammary artery, and aorta) and from different species demonstrated that Ad5.Fib16 consistently displays improved infection in primates (humans and rhesus monkeys). SMCs of the same vessels of rodents and pigs were less infectable with Ad5.Fib16 than with Ad5. This suggests that either the receptor for human **Ad16** is not conserved between different species or that differences in the expression levels of the putative receptor exist. In conclusion, our results show that an Ad5-based virus carrying the **fiber** of **Ad16** is a potent vector for the transduction of primate cardiovascular cells and tissues.

L1 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:160682 CAPLUS
TITLE: Species-specific identification of human adenoviruses by a multiplex PCR assay
AUTHOR(S): Xu, Wanhong; McDonough, Mike C.; Erdman, Dean D.
CORPORATE SOURCE: Respiratory and Enteric Viruses Branch, Division of Viral and Rickettsial Diseases, Centers for Disease Control and Prevention, Atlanta, GA, 30333, USA
SOURCE: J. Clin. Microbiol. (2000), 38(11), 4114-4120
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A multiplex PCR assay was developed by using primers to the **fiber** gene that could differentiate human adenovirus (Ad) species A through F in a single amplification reaction. The assay correctly identified the species of all 49 recognized Ad prototype strains as well as 180 geog. and temporally diverse Ad field isolates. Ad serotype 6 (Ad6) (species C), **Ad16** (species B), Ad31 (species A), and Ad40 and Ad41 (species F) could also be distinguished by amplicon size within each resp. species. In comparison, a previously described Ad species-specific multiplex PCR assay that used primers to the Ad hexon gene gave equivocal results with several serotypes of species B, whereas our multiplex assay amplified all species B serotypes equally well. Our multiplex PCR assay will permit rapid, accurate, and cost-effective classification of Ad isolates.
REFERENCE COUNT: 53
REFERENCE(S): (1) Adrian, T; Arch Virol 1986, V91, P277 CAPLUS
(2) Adrian, T; Arch Virol 1989, V105, P81 CAPLUS
(4) Allard, A; J Clin Microbiol 1990, V28, P2659 CAPLUS
(7) Chroboczek, J; Virology 1987, V161, P549 CAPLUS
(9) Crawford-Miksza, L; J Clin Microbiol 1999, V37, P1107 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:368622 CAPLUS
DOCUMENT NUMBER: 133:27392
TITLE: Chimeric adenoviral vectors specific for gene transfer
to smooth muscle cells, and/or endothelial cells
INVENTOR(S): Havenga, Menzo Jans Emco; Bout, Abraham; Vogels, Ronald
PATENT ASSIGNEE(S): Introgene B.V., Neth.
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000031285	A1	20000602	WO 1999-NL717	19991122
W: AM, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, GD, GE, GH, GM, HR, HU, ID, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, MA, MD, MG, MN, MW, PL, RU, SD, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NO 9905697	A	20000522	NO 1999-5697	19991119
EP 1020529	A2	20000719	EP 1999-203878	19991119
EP 1020529	A3	20000816		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9959600	A1	20000525	AU 1999-59600	19991122
JP 2000157289	A2	20000613	JP 1999-332033	19991122
PRIORITY APPLN. INFO.:			EP 1998-203921	19981120

AB The invention provides chimeric adenoviral vectors with tissue tropism of smooth muscle cells, and/or endothelial cells (but not of liver cells) used for gene transfer in gene therapy. The chimeric adenoviral vectors is constructed by switching the functional part (**fiber** protein subunit) of adenoviral capsid protein in adenovirus type 5 vector to that of a subgroup B adenovirus, preferably adenovirus 16 (**Ad16**). The biodistribution of these chimeric vector after i.v. tail vein injection of rats and and their display differences in the endothelial and smooth muscle cell transduction are detd. The infection efficiency of Ad5 vector to smooth muscle cells, and/or endothelial cells can be increased significantly by changing the **fiber** subunit (esp. shaft and knob parts) of capsid protein to that of **Ad16**. In this way, the host immune response to recombinant viruses derived from the chimeric adenovirus vectors are greatly reduced. The contribution of cellular receptors such as CAR (Coxsackievirus and adenovirus receptor) or integrin to viral infection is also studied. Methods of prepg. various chimeric adenovirus vectors and using them to treat diseases, preferably cardiovascular diseases are also provided.

REFERENCE COUNT: 8
REFERENCE(S):
(1) Armentano, D; WO 9822609 A 1998 CAPLUS
(2) Fallaux, F; HUM GENE THER 1998, V9, P1909 CAPLUS
(3) Gall, J; J VIROL 1996, V70(4), P2116 CAPLUS

(4) Genvec Inc; WO 9720051 A 1997 CAPLUS
(5) Karayan, L; WO 9833929 A 1998 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1990:461438 CAPLUS
DOCUMENT NUMBER: 113:61438
TITLE: Water-resistant finishing compositions for walls
INVENTOR(S): Takahashi, Masanori; Oishi, Koji; Miyatake, Masatoshi
PATENT ASSIGNEE(S): Shikoku Chemicals Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02055773	A2	19900226	JP 1988-208925	19880822

AB The compns. contain Na CMC and weak cationic acrylic emulsions in addn. to fillers, pigments, **fibers**, and base materials. Thus, an aq. paste of 72:22:6 sand-colored soil-powd. pulp mixt. 100, Na CMC 1.5, and **AD 16** (acrylic polymer) 6 parts showed pot life 48 h and was spread on a gypsum board and naturally dried to give a film showing embossed design, adhesion 6.5 kg/cm2, and good water resistance.

L1 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1989:52313 CAPLUS
DOCUMENT NUMBER: 110:52313
TITLE: Nucleic acid hybridization for detection of cell culture-amplified adenovirus
AUTHOR(S): Huang, Cinnia; Deibel, Rudolf
CORPORATE SOURCE: New York State Dep. Health, Wadsworth Cent. Lab. Res., Albany, NY, 12201-0509, USA
SOURCE: J. Clin. Microbiol. (1988), 26(12), 2652-6
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A no. of recombinant plasmids contg. genomic segments of adenovirus were constructed. Seven cloned probes, as well as total adenovirus type 2 (Ad2) and **Ad16** genomic DNA, were tested by a nucleic acid hybridization technique for sensitivity and specificity in detecting adenoviruses in infected cells. Adenovirus DNA was spotted onto a nitrocellulose filter and hybridized with 32P-labeled DNA probes. The probes, total Ad2 genomic DNA, and plasmid pAd2-H (contg. the hexon gene from Ad2 DNA) all detected 10 ref. serotypes of 5 genomic subgroups (A through E) with similar sensitivities. However, plasmid pAd2-H required less prepn. time than did total Ad2 DNA. Probes pAd2-F (contg. the **fiber** gene from Ad2) and pAd16-BD (contg. the BamHI D fragment from **Ad16**) hybridized only with ref. serotypes from the homologous subgroups (C and B, resp.). Of 101 patient isolates amplified in cells, pAd2-H detected 100% of all isolates from both the homologous and the heterologous subgroups. The detection rates for pAd2-F were 100% (subgroup C) and 3.6% (subgroups A, B, and D), and those for pAd16-BD were

100% (subgroup B) and 9.4% (subgroups A, C, and D). A com. biotinylated product (Pathogene II) was also included in this study for comparison.

L1 ANSWER 6 OF 10 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1989:74436 BIOSIS
DOCUMENT NUMBER: BA87:38834
TITLE: NUCLEIC ACID HYBRIDIZATION FOR DETECTION OF CELL CULTURE-AMPLIFIED ADENOVIRUS.
AUTHOR(S): HUANG C; DEIBEL R
CORPORATE SOURCE: WADSWORTH CENT. LAB. RES., NEW YORK STATE DEP. HEALTH, BOX 509, ALBANY, N.Y. 12201-0509.
SOURCE: J CLIN MICROBIOL, (1988) 26 (12), 2652-2656.
CODEN: JCMIDW. ISSN: 0095-1137.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB A number of recombinant plasmids containing genomic segments of adenovirus were constructed. Seven cloned probes, as well as total adenovirus type 2 (Ad2) and **Ad16** genomic DNA, were tested by a nucleic acid hybridization technique for sensitivity and specificity in detecting adenoviruses in infected cells. Adenovirus DNA was spotted onto a nitrocellulose filter and hybridized with 32P-labeled DNA probes. The probes, total Ad2 genomic DNA, and plasmid pAd2-H (containing the hexon gene from Ad2 DNA) all detected 10 reference serotypes of five genomic subgroups (A through E) with similar sensitivities. However, plasmid pAd2-H required less preparation time than did total Ad2 DNA. Probes pAd2-F (containing the **fiber** gene from Ad2) and pAd16-BD (containing the BamHI D fragment from **Ad16**) hybridized only with reference serotypes from the homologous subgroups (C and B, respectively).
Of 101 patient isolates amplified in cells, pAd2-H detected 100% of all isolates from both the homologous and the heterologous subgroups. The detection rates for pAd2-F were 100% (subgroup C) and 3.6% (subgroups A, B, and D), and those for pAd16-BD were 100% (subgroup B) and 9.4% (subgroups A, C, and D). A commerical biotinylated product (Pathogene II) was also included in this study for comparison.

L1 ANSWER 7 OF 10 MEDLINE
ACCESSION NUMBER: 2001089804 MEDLINE
DOCUMENT NUMBER: 20514249
TITLE: Species-specific identification of human adenoviruses by a multiplex PCR assay.
AUTHOR: Xu W; McDonough M C; Erdman D D
CORPORATE SOURCE: Respiratory and Enteric Viruses Branch, Division of Viral and Rickettsial Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia 30333, USA.
SOURCE: JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Nov) 38 (11) 4114-20.
Journal code: HSH. ISSN: 0095-1137.
PUB. COUNTRY: United States
(EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
AB A multiplex PCR assay was developed by using primers to the **fiber** gene that could differentiate human adenovirus (Ad) species A through F in

a single amplification reaction. The assay correctly identified the species of all 49 recognized Ad prototype strains as well as 180 geographically and temporally diverse Ad field isolates. Ad serotype 6 (Ad6) (species C), **Ad16** (species B), Ad31 (species A), and Ad40 and Ad41 (species F) could also be distinguished by amplicon size within each respective species. In comparison, a previously described Ad species-specific multiplex PCR assay that used primers to the Ad hexon gene gave equivocal results with several serotypes of species B, whereas our multiplex assay amplified all species B serotypes equally well. Our multiplex PCR assay will permit rapid, accurate, and cost-effective classification of Ad isolates.

L1 ANSWER 8 OF 10 MEDLINE
ACCESSION NUMBER: 89155765 MEDLINE
DOCUMENT NUMBER: 89155765
TITLE: Nucleic acid hybridization for detection of cell culture-amplified adenovirus.
AUTHOR: Huang C; Deibel R
CORPORATE SOURCE: Wadsworth Center for Laboratories and Research, New York State Department of Health, Albany 12201-0509.
SOURCE: JOURNAL OF CLINICAL MICROBIOLOGY, (1988 Dec) 26 (12) 2652-6.
Journal code: HSH. ISSN: 0095-1137.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198906
AB A number of recombinant plasmids containing genomic segments of adenovirus were constructed. Seven cloned probes, as well as total adenovirus type 2 (Ad2) and **Ad16** genomic DNA, were tested by a nucleic acid hybridization technique for sensitivity and specificity in detecting adenoviruses in infected cells. Adenovirus DNA was spotted onto a nitrocellulose filter and hybridized with 32P-labeled DNA probes. The probes, total Ad2 genomic DNA, and plasmid pAd2-H (containing the hexon gene from Ad2 DNA) all detected 10 reference serotypes of five genomic subgroups (A through E) with similar sensitivities. However, plasmid pAd2-H required less preparation time than did total Ad2 DNA. Probes pAd2-F (containing the **fiber** gene from Ad2) and pAd16-BD (containing the BamHI D fragment from **Ad16**) hybridized only with reference serotypes from the homologous subgroups (C and B, respectively).
Of 101 patient isolates amplified in cells, pAd2-H detected 100% of all isolates from both the homologous and the heterologous subgroups. The detection rates for pAd2-F were 100% (subgroup C) and 3.6% (subgroups A, B, and D), and those for pAd16-BD were 100% (subgroup B) and 9.4% (subgroups A, C, and D). A commercial biotinylated product (Pathogene II) was also included in this study for comparison.

L1 ANSWER 9 OF 10 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 89001590 EMBASE
DOCUMENT NUMBER: 1989001590
TITLE: Nucleic acid hybridization for detection of cell culture-amplified adenovirus.
AUTHOR: Huang C.; Deibel R.
CORPORATE SOURCE: Wadsworth Center for Laboratories and Research, New York State Department of Health, Albany, NY 12201-0509, United

States
SOURCE: Journal of Clinical Microbiology, (1988) 26/12 (2652-2656).
ISSN: 0095-1137 CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 047 Virology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB A number of recombinant plasmids containing genomic segments of adenovirus were constructed. Seven cloned probes, as well as total adenovirus type 2 (Ad2) and **Ad16** genomic DNA, were tested by a nucleic acid hybridization technique for sensitivity and specificity in detecting adenoviruses in infected cells. Adenovirus DNA was spotted onto a nitricellulose filter and hybridized with 32P-labeled DNA probes. The probes, total Ad2 genomic DNA, and plasmid pAd2-H (containing the hexon gene from Ad2 DNA) all detected 10 reference serotypes of five genomic subgroups (A through E) with similar sensitivities. However, plasmid pAd2-H required less preparation time than did total Ad2 DNA. Probes pAd2-F (containing the **fiber** gene from Ad2) and pAd16-BD (containing the BamHI D fragment from **Ad16**) hybridized only with reference serotypes from the homologous subgroups (C and B, respectively).

Of 101 patients isolates amplified in cells, pAd2-H detected 100% of all isolates from both the homologous and the heterologous subgroups. The detection rates for pAd2-F were 100% (subgroup C) and 3.6% (subgroups A, B, and D), and those for pAd16-BD were 100% (subgroup B) and 9.4% (subgroups A, C, and D). A commercial biotinylated product (Pathogene II) was also included in this study for comparison.

L1 ANSWER 10 OF 10 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2001:145221 SCISEARCH
THE GENUINE ARTICLE: 400VT
TITLE: Species-specific identification of human adenoviruses by a multiplex PCR assay
AUTHOR: Xu W H; McDonough M C; Erdman D D (Reprint)
CORPORATE SOURCE: Ctr Dis Control & Prevent, Resp & Enter Viruses Branch, Div Viral & Rickettsial Dis, Mailstop G-09, 1600 Clifton Rd NE, Atlanta, GA 30333 USA (Reprint); Ctr Dis Control & Prevent, Resp & Enter Viruses Branch, Div Viral & Rickettsial Dis, Atlanta, GA 30333 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF CLINICAL MICROBIOLOGY, (NOV 2000) Vol. 38, No. 11, pp. 4114-4120.
Publisher: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904 USA.
ISSN: 0095-1137.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 53

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB A multiplex PCR assay was developed by using primers to the **fiber** gene that could differentiate human adenovirus (Ad) species A through F in a single amplification reaction, The assay correctly identified the species of all 49 recognized Ad prototype strains as well as 180 geographically and temporally diverse Ad field isolates. Ad

serotype 6 (Ad6) (species C), **Ad16** (species B), Ad31 (species A), and Ad40 and Ad41 (species F) could also be distinguished by amplicon size within each respective species. In comparison, a previously described Ad species-specific multiplex PCR assay that used primers to the Ad hexon gene gave equivocal results with several serotypes of species B, whereas our multiplex assay amplified all species B serotypes equally well. Our multiplex PCR assay will permit rapid, accurate, and cost-effective classification of Ad isolates.

=> l1 and (ad5)
L1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and (ad5)
L2 2 L1 AND (AD5)

=> d ibib abs l2 1-2

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:205186 CAPLUS
TITLE: Improved adenovirus vectors for infection of cardiovascular tissues
AUTHOR(S): Havenga, M. J. E.; Lemckert, A. A. C.; Grimbergen, J. M.; Vogels, R.; Huisman, L. G. M.; Valerio, D.; Bout, A.; Quax, P. H. A.
CORPORATE SOURCE: Crucell Holland B.V., Leiden, 2301 CA, Neth.
SOURCE: J. Virol. (2001), 75(7), 3335-3342
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To identify improved adenovirus vectors for cardiovascular gene therapy, a library of adenovirus vectors based on adenovirus serotype 5 (**Ad5**) but carrying **fiber** mols. of other human serotypes, was generated. This library was tested for efficiency of infection of human primary vascular endothelial cells (ECs) and smooth muscle cells (SMCs). Based on luciferase, LacZ, or green fluorescent protein (GFP) marker gene expression, several **fiber** chimeric vectors were identified that displayed improved infection of these cell types. One of the viruses that performed particularly well is an **Ad5** carrying the **fiber** of **Ad16** (**Ad5**.Fib16), a subgroup B virus. This virus showed, on av., 8- and 64-fold-increased luciferase activities on umbilical vein ECs and SMCs, resp., compared to the parent vector. GFP and lacZ markers showed that approx. 3-fold (ECs) and 10-fold (SMCs) more cells were transduced. Expts. performed with both cultured SMCs and organ cultures derived from different vascular origins (saphenous vein, iliac artery, left interior mammary artery, and aorta) and from different species demonstrated that **Ad5**.Fib16 consistently displays improved infection in primates (humans and rhesus monkeys). SMCs of the same vessels of rodents and pigs were less infectable with **Ad5**.Fib16 than with **Ad5**. This suggests that either the receptor

for human **Ad16** is not conserved between different species or that differences in the expression levels of the putative receptor exist. In conclusion, our results show that an **Ad5**-based virus carrying the **fiber** of **Ad16** is a potent vector for the transduction of primate cardiovascular cells and tissues.

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:368622 CAPLUS
DOCUMENT NUMBER: 133:27392
TITLE: Chimeric adenoviral vectors specific for gene transfer
to smooth muscle cells, and/or endothelial cells
INVENTOR(S): Havenga, Menzo Jans Emco; Bout, Abraham; Vogels, Ronald
PATENT ASSIGNEE(S): Introgene B.V., Neth.
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000031285	A1	20000602	WO 1999-NL717	19991122
W: AM, AZ, BA, BB, BG, BR, BY, CA, CN, CR, CU, CZ, DM, GD, GE, GH, GM, HR, HU, ID, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, MA, MD, MG, MN, MW, PL, RU, SD, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NO 9905697	A	20000522	NO 1999-5697	19991119
EP 1020529	A2	20000719	EP 1999-203878	19991119
EP 1020529	A3	20000816		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9959600	A1	20000525	AU 1999-59600	19991122
JP 2000157289	A2	20000613	JP 1999-332033	19991122
PRIORITY APPLN. INFO.:			EP 1998-203921	19981120

AB The invention provides chimeric adenoviral vectors with tissue tropism of smooth muscle cells, and/or endothelial cells (but not of liver cells) used for gene transfer in gene therapy. The chimeric adenoviral vectors is constructed by switching the functional part (**fiber** protein subunit) of adenoviral capsid protein in adenovirus type 5 vector to that of a subgroup B adenovirus, preferably adenovirus 16 (**Ad16**). The biodistribution of these chimeric vector after i.v. tail vein injection of rats and and their display differences in the endothelial and smooth muscle cell transduction are detd. The infection efficiency of **Ad5** vector to smooth muscle cells, and/or endothelial cells can be increased significantly by changing the **fiber** subunit (esp. shaft and knob parts) of capsid protein to that of **Ad16**. In this way, the host immune response to recombinant viruses derived from the chimeric adenovirus vectors are greatly reduced. The contribution of cellular receptors such as CAR (Coxsackievirus and adenovirus receptor) or integrin to viral infection is also studied. Methods of prepg. various

chimeric adenovirus vectors and using them to treat diseases, preferably cardiovascular diseases are also provided.

REFERENCE COUNT: 8

REFERENCE(S):
(1) Armentano, D; WO 9822609 A 1998 CAPLUS
(2) Fallaux, F; HUM GENE THER 1998, V9, P1909 CAPLUS
(3) Gall, J; J VIROL 1996, V70(4), P2116 CAPLUS
(4) Genvec Inc; WO 9720051 A 1997 CAPLUS
(5) Karayan, L; WO 9833929 A 1998 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:39:31 ON 29 MAR 2001)

FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT 15:40:27 ON 29 MAR 2001

L1 10 S ((ADENOVIR? NEAR3 SUBGROUP B) OR AD16 OR AD-16 OR AD 16 OR AD

L2 2 S L1 AND (AD5)

=> s ((Adenovir? near3 subgroup B) same fiber
MISSING OPERATOR B) SAME
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (Adenovir? near3 subgroup B) same fiber
MISSING OPERATOR B) SAME
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (Adenovir? near3 subgroup(w)B) same fiber
MISSING OPERATOR B) SAME
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (Adenovir? near3 subgroup B) (L) fiber
L3 0 (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER

=> s (Adenovir? near5 B) (L) fiber
L4 0 (ADENOVIR? NEAR5 B) (L) FIBER

=> s (Ad3 or Ad7 or Ad11 or Ad14 or Ad21 or Ad34 or Ad35) (L) fiber
L5 162 (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L) FIBER

=> l5 and Ad5
L5 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l5 and Ad5
L6 84 L5 AND AD5

=> s l5 and tropism
L7 35 L5 AND TROPISM

=> s l7 and ((gene (2w) delivery) or (gen? therap?))

```
   2 FILES SEARCHED...
   4 FILES SEARCHED...
   5 FILES SEARCHED...
L8          14 L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))

=> dup rem l7
PROCESSING COMPLETED FOR L7
L9          10 DUP REM L7 (25 DUPLICATES REMOVED)

=> dup rem l8
PROCESSING COMPLETED FOR L8
L10          5 DUP REM L8 (9 DUPLICATES REMOVED)

=> d his

     (FILE 'HOME' ENTERED AT 15:39:31 ON 29 MAR 2001)

     FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT
     15:40:27 ON 29 MAR 2001
L1          10 S ((ADENOVIR? NEAR3 SUBGROUP B) OR AD16 OR AD-16 OR AD 16 OR
AD
L2           2 S L1 AND (AD5)
L3           0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4           0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5         162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
FIBE
L6          84 S L5 AND AD5
L7          35 S L5 AND TROPISM
L8          14 S L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))
L9          10 DUP REM L7 (25 DUPLICATES REMOVED)
L10          5 DUP REM L8 (9 DUPLICATES REMOVED)

=> d ibib abs l9 1-10

L9   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2001 ACS        DUPLICATE 1
ACCESSION NUMBER:        2000:799816  CAPLUS
TITLE:                   Dependence of adenovirus infectivity on length of the
                         fiber shaft domain
AUTHOR(S):               Shayakhmetov, Dmitry M.; Lieber, Andre
CORPORATE SOURCE:        Division of Medical Genetics, University of
                         Washington, Seattle, WA, 98195, USA
SOURCE:                  J. Virol. (2000), 74(22), 10274-10286
                         CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER:               American Society for Microbiology
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   One of the objectives in adenovirus (Ad) vector development is to target
     gene delivery to specific cell types.  Major attention has been given to
     modification of the Ad fiber knob, which is thought to det.
     virus tropism.  However, among the human Ad serotypes with
     different tissue tropisms, not only the knob but also the length
     of the fiber shaft domain varies significantly.  In this study
     we attempted to delineate the role of fiber length in
     coxsackievirus-adenovirus receptor (CAR)- and non-CAR-mediated infection.
     A series of Ad serotype 5 (Ad5) capsid-based vectors contg. long or short
     fibers with knob domains derived from Ad5, Ad9, or Ad35
     was constructed and tested in adsorption, internalization, and
     transduction studies.  For Ad5 or Ad9 knob-possessing vectors, a
```

long-shafted **fiber** was crit. for efficient adsorption/internalization and transduction of CAR/.alpha.v integrin-expressing cells. Ad5 capids contg. short CAR-recognizing **fibers** were affected in cell adsorption and infection. In contrast, for the chimeric vectors possessing **Ad35** knobs, which enter cells by a CAR/.alpha.v integrin-independent pathway, **fiber** shaft length had no significant influence on binding or infectibility on tested cells. The weak attachment of short-shafted Ad5 or Ad9 knob-possessing vectors seems to be causally assocd. with a charge-dependent repulsion between Ad5 capsid and acidic cell surface proteins. The differences between short- and long-shafted vectors in attachment or infection were abrogated by preincubation of cells with polycations. This study demonstrates that the **fiber**-CAR interaction is not the sole determinant for **tropism** of Ad vectors contg. chimeric **fibers**. CAR- and .alpha.v integrin-mediated infections are influenced by other factors, including the length of the **fiber** shaft.

REFERENCE COUNT: 73

REFERENCE(S):
(1) Arcasoy, S; Am J Respir Cell Mol Biol 1997, V17, P422 CAPLUS
(2) Arnberg, N; J Virol 2000, V74, P42 CAPLUS
(3) Arnberg, N; Virology 1997, V227, P239 CAPLUS
(4) Bai, M; J Virol 1993, V67, P5198 CAPLUS
(5) Bailey, A; Virology 1994, V205, P438 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 2

ACCESSION NUMBER: 2000:154173 CAPLUS
DOCUMENT NUMBER: 132:343901

TITLE: Efficient gene transfer into human CD34+ cells by a retargeted adenovirus vector

AUTHOR(S): Shayakhmetov, Dmitry M.; Papayannopoulou, Thalia; Stamatoyannopoulos, George; Lieber, Andre
CORPORATE SOURCE: Division of Medical Genetics, Department of Medicine, University of Washington, Seattle, WA, 98195, USA

SOURCE: J. Virol. (2000), 74(6), 2567-2583
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Efficient infection with adenovirus (Ad) vectors based on serotype 5 (Ad5) requires the presence of coxsackievirus-adenovirus receptors (CAR) and .alpha.v integrins on cells. The paucity of these cellular receptors is thought to be a limiting factor for Ad gene transfer into hematopoietic stem cells. In a systematic approach, we screened different Ad serotypes for interaction with noncycling human CD34+ cells and K562 cells on the level of virus attachment, internalization, and replication. From these studies, serotype 35 emerged as the variant with the highest **tropism** for CD34+ cells. A chimeric vector (Ad5GFP/F35) was generated which contained the short-shafted **Ad35 fiber** incorporated into an Ad5 capsid. This substitution was sufficient to transplant all infection properties from **Ad35** to the chimeric vector. The retargeted, chimeric vector attached to a receptor different from CAR and entered cells by an .alpha.v integrin-independent pathway. In transduction studies, Ad5GFP/F35 expressed green fluorescent protein (GFP) in 54% of CD34+ cells. In comparison, the std. Ad5GFP vector conferred GFP expression to only 25% of CD34+ cells. Importantly, Ad5GFP

transduction, but not Ad5GFP/F35, was restricted to a specific subset of CD34+ cells expressing .alpha.v integrins. The actual transduction efficiency was even higher than 50% because Ad5GFP/F35 viral genomes were found in GFP-neg. CD34+ cell fractions, indicating that the cytomegalovirus promoter used for transgene expression was not active in all transduced cells. The chimeric vector allowed for gene transfer into a broader spectrum of CD34+ cells, including subsets with potential stem cell capacity. Fifty-five percent of CD34+ c-Kit+ cells expressed GFP after infection with Ad5GFP/F35, whereas only 13% of CD34+ c-Kit+ cells were GFP pos. after infection with Ad5GFP. These findings represent the basis for studies aimed toward stable gene transfer into hematopoietic stem cells.

REFERENCE COUNT: 82

REFERENCE(S): (1) Bailey, A; Virology 1994, V205, P438 CAPLUS
(2) Becker, P; Exp Hematol 1999, V27, P533 CAPLUS
(3) Bergelson, J; Science 1997, V275, P1320 CAPLUS
(4) Bodine, D; Blood 1993, V82, P1975 CAPLUS
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 3

ACCESSION NUMBER: 2000:4864 CAPLUS
DOCUMENT NUMBER: 132:147352
TITLE: Adenovirus vector pseudotyping in fiber-expressing cell lines: improved transduction of Epstein-Barr virus-transformed B cells

AUTHOR(S): Von Seggern, Dan J.; Huang, Shuang; Fleck, Shonna Kaye; Stevenson, Susan C.; Nemerow, Glen R.
CORPORATE SOURCE: Department of Immunology, Scripps Research Institute, La Jolla, CA, 92037, USA

SOURCE: J. Virol. (2000), 74(1), 354-362
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB While adenovirus (Ad) gene delivery vectors are useful in many gene therapy applications, their broad **tropism** means that they cannot be directed to a specific target cell. There are also a no. of cell types involved in human disease which are not transducible with std. Ad vectors, such as Epstein-Barr virus (EBV)-transformed B lymphocytes. Adenovirus binds to host cells via the viral **fiber** protein, and Ad vectors have previously been retargeted by modifying the **fiber** gene on the viral chromosome. This requires that the modified **fiber** be able to bind to the cell in which the vector is grown, which prevents truly specific vector targeting. We previously reported a gene delivery system based on a **fiber** gene-deleted Ad type 5 (Ad5) vector (Ad5..beta.gal..DELTA.F) and packaging cells that express the viral **fiber** protein. Expression of different **fibers** in packaging cells will allow Ad retargeting without modifying the viral chromosome. Importantly, **fiber** proteins which can no longer bind to the producer cells can also be used. Using this approach, we generated for the first time pseudotyped Ad5..beta.gal..DELTA.F particles contg. either the wild-type Ad5 **fiber** protein or a chimeric **fiber** with the receptor-binding knob domain of the **Ad3** **fiber**. Particles equipped with the chimeric **fiber** bound to the **Ad3** receptor rather than the coxsackievirus-adenovirus

receptor protein used by Ad5. EBV-transformed B lymphocytes were infected
efficiently by the **Ad3**-pseudotyped particles but poorly by virus contg. the Ad5 **fiber** protein. The strategy described here represents a broadly applicable method for targeting gene delivery to specific cell types.

REFERENCE COUNT: 60
REFERENCE(S):
(2) Bergelson, J; Biochem Pharmacol 1999, V57, P975 CAPLUS
(3) Bergelson, J; Science 1997, V275, P1320 CAPLUS
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(7) Dmitriev, I; J Virol 1998, V72, P9706 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 10 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:790795 SCISEARCH
THE GENUINE ARTICLE: 244VJ
TITLE: Mutations in the DG loop of adenovirus type 5 fiber knob protein abolish high-affinity binding to its cellular receptor CAR
AUTHOR: Kirby I; Davison E; Beavil A J; Soh C P C; Wickham T J; Roelvink P W; Kovesdi I; Sutton B J; Santis G (Reprint)
CORPORATE SOURCE: GUYS HOSP, GUYS KINGS COLL & ST THOMAS HOSP SCH MED, DEPT RESP MED & ALLERGY, THOMAS GUY HOUSE, LONDON SE1 9RT, ENGLAND (Reprint); GUYS HOSP, GUYS KINGS COLL & ST THOMAS HOSP SCH MED, DEPT RESP MED & ALLERGY, LONDON SE1 9RT, ENGLAND; UNIV LONDON KINGS COLL, RANDALL INST, LONDON WC2B 5RL, ENGLAND; GENVEC INC, ROCKVILLE, MD 20852
COUNTRY OF AUTHOR: ENGLAND; USA
SOURCE: JOURNAL OF VIROLOGY, (NOV 1999) Vol. 73, No. 11, pp. 9508-9514.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0022-538X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 41

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The amino acid residues in adenovirus type 5 (Ad5) **fiber** that interact with its cellular receptor, the coxsackie PS virus and Ad receptor (CAR), have not been defined, To investigate this, multiple mutations were constructed in the region between residues 479 and 497 in Ad5 **fiber** (beta-strands E and F and the adjacent region of the DG loop). The effects of these mutations on binding to CAR were determined by use of cell-binding competition experiments, surface plasmon resonance, and direct binding studies. The mutation effects on the overall folding and secondary structure of the protein were assessed by circular dichroism (CD) spectroscopy. Deletions of two consecutive amino acids between residues 485 and 493 abolished high-affinity binding to CAR; the CD spectra indicated that although there was no disruption of the overall folding and secondary structure of the protein, local conformational changes did occur. Moreover, single site mutations in this region of

residues with exposed, surface-accessible side chains, such as Thr492, Asn493, and Val495, had no effect on receptor binding, which demonstrates that these residues are not in contact with CAR themselves. This implies the involvement of residues in neighboring loop regions. Replacement of the segment containing the two very short beta-strands E and F and the turn between them (residues 479 to 486) with the corresponding sequence from **Ad3** (beta EFAd3 --> 5 mutation) resulted in the loss of receptor binding. The identical CD spectra for beta EFAd3 --> 5 and wild-type proteins suggest that these substitutions caused no conformational rearrangement and that the loss of binding may thus be due to the substitution of one or more critical contact residues. These findings have implications for our understanding of the interaction of Ad5 **fiber** with CAR and for the construction of targeted recombinant Ad5 vectors for gene therapy purposes.

L9 ANSWER 5 OF 10 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:468924 SCISEARCH
THE GENUINE ARTICLE: 205GT
TITLE: Fiber swap between adenovirus subgroups B and C alters intracellular trafficking of adenovirus gene transfer vectors
AUTHOR: Miyazawa N; Leopold P L; Hackett N R; Ferris B; Worgall S; FalckPedersen E; Crystal R G (Reprint)
CORPORATE SOURCE: CORNELL UNIV, NEW YORK PRESBYTERIAN HOSP, WEILL MED COLL, DEPT MED, 520 E 70TH ST, ROOM ST 505, NEW YORK, NY 10021 (Reprint); CORNELL UNIV, NEW YORK PRESBYTERIAN HOSP, WEILL MED COLL, DEPT MED, NEW YORK, NY 10021; CORNELL UNIV, NEW YORK PRESBYTERIAN HOSP, WEILL MED COLL, DEPT MICROBIOL, NEW YORK, NY 10021
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF VIROLOGY, (JUL 1999) Vol. 73, No. 7, pp. 6056-6065.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0022-538X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 54

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Following receptor binding and internalization, intracellular trafficking of adenovirus (Ad) among subgroups B and C is different, with significant amounts of Ad serotype 7 (**Ad7**) (subgroup B) virions found in cytoplasm during the initial hours of infection while Ad5 (subgroup C) virions rapidly translocate to the nucleus. To evaluate the role of the **fiber** in these differences, we examined intracellular trafficking of Ad5, **Ad7**, and Ad5f7 (a chimeric vector composed of the Ad5 capsid with the **fiber** replaced by the **Ad7 fiber**) by conjugating Ad capsids directly with Cy3 fluorescent dye, permitting the trafficking of the capsids to be examined by fluorescence microscopy. The human lung carcinoma cell line A549 was infected with Cy3-conjugated viruses for 10 min followed by a 1-h incubation. Ad5 virions rapidly translocated to the nucleus (within 1 h of infection), while **Ad7** virions were widely distributed in the

cytoplasm at the same time point. Interestingly, chimeric Ad5f7 virions behaved similarly to **Ad7** but not Ad5. In this regard, the percentages of nuclear localization of Ad5, **Ad7**, and Ad5f7 at 1 h following infection were 72% +/- 4%, 32% +/- 6%, and 38% +/-2%, respectively. Consistent with these observations, fluorescence in situ hybridization demonstrated that most of the Ad5 DNA was detected at the nucleus after 1 h, but at the same time point, DNA of **Ad7** and Ad5f7 was distributed in both the nucleus and cytoplasm. Quantification of the kinetics of Ad genomic DNA delivery to the nucleus using a fluorogenic probe-based PCR assay (TaqMan PCR) demonstrated that the percentages of nuclear association of Ad5 DNA and Ad5f7 DNA at 1 h postinfection were 80% +/- 13% and 43% +/- 1%, respectively. Although it has been generally accepted that Ad **fiber** protein mediates attachment of virions to cells and that **fibers** dissociate during endocytic uptake, these data suggest that in addition to mediating binding to the cell surface, **fiber** likely modulates intracellular trafficking as well.

L9 ANSWER 6 OF 10 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1998:122927 BIOSIS
DOCUMENT NUMBER: PREV199800122927
TITLE: Two closely adenovirus genome types with kidney or respiratory tract **tropism** differ in their binding to epithelial cells of various origins.
AUTHOR(S): Mei, Ya-Fang; Lindman, Kristina; Wadell, Goran (1)
CORPORATE SOURCE: (1) Dep. Virol., Umea Univ., S-901 85 Umea Sweden
SOURCE: Virology, (Jan. 20, 1998) Vol. 240, No. 2, pp. 254-266. ISSN: 0042-6822.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The host-cell interactions of the genome types Ad11p and Ad11a of human adenovirus serotype 11, displaying kidney or respiratory **tropism**, were compared using FACS analysis. Kinetic experiments indicated that the virus binding started immediately and reached a plateau after 30 min. The binding of biotinylated virions to seven continuous cell lines: A549, A498, J82, HeLa, CHO, MDCK, and human diploid fibroblasts (HEDF), was quantitated by FACS analysis. The binding capacities of the two viruses to all human cell lines but A549 cells appeared to differ. **Ad11** pvirions manifested high affinities, whereas Ad11a virions presented low affinities. Neither of the two viruses bound to CHO or MDCK cells. Reciprocal competition experiments showed that the Ad11a virions could be weakly blocked by the Ad11p virions, whereas the Ad11p virions could not be competed at all by the Ad11a virions. The binding of the Ad11p virions to cells could be blocked by the **fiber** antiserum of Ad11p, but not by the corresponding antiserum against Ad11a or Ad35p. A comparison of the cytopathogenicity of the seven cell lines infected by Ad11p and Ad11a demonstrated that the efficiency of the initial event of an adenovirus infection directly affects the outcome of the viral infection. The Ad11a in the A498,J82, HeLa, or HEDF cells that presented lower affinity and receptor concentration showed 100 times less infectivity than that in A549 cells displaying high affinity and receptor concentration. These results indicate that the cell susceptibility to Ad11p and Ad11a infection strongly depends on both the number of **fiber** receptors on the host cells and the receptor affinity for ligands on the **fiber** knob. Our findings also suggest that the receptors for Ad11p

and Ad11a on the surface of different cell types may be different or on different sites.

L9 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 4
ACCESSION NUMBER: 1997:324716 CAPLUS
DOCUMENT NUMBER: 127:76682
TITLE: Selective targeting of human cells by a chimeric adenovirus vector containing a modified fiber protein
AUTHOR(S): Stevenson, Susan C.; Rollence, Michele; Marshall-Neff, Jennifer; McClelland, Alan
CORPORATE SOURCE: Dep. of Molecular and Cell Biology, Genetic Therapy, Inc., Gaithersburg, MD, 20878, USA
SOURCE: J. Virol. (1997), 71(6), 4782-4790
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The adenovirus **fiber** protein is responsible for attachment of the virion to unidentified cell surface receptors. There are at least two distinct adenovirus **fiber** receptors which interact with the group B (**Ad3**) and group C (Ad5) adenoviruses. We have previously shown by using expressed adenovirus **fiber** proteins that it is possible to change the specificity of the **fiber** protein by exchanging the head domain with another serotype which recognizes a different receptor (S. C. Stevenson et al., J. Virol. 69:2850-2857, 1995). A chimeric **fiber** cDNA contg. the **Ad3 fiber** head domain fused to the Ad5 **fiber** tail and shaft was incorporated into the genome of an adenovirus vector with E1 and E3 deleted encoding .beta.-galactosidase to generate Av9LacZ4, an adenovirus particle which contains a chimeric **fiber** protein. Western blot anal. of the chimeric **fiber** vector confirmed expression of the chimeric **fiber** protein and its assocn. with the adenovirus capsid. Transduction expts. with **fiber** protein competitors demonstrated the altered **tropism** of the chimeric **fiber** vector compared to that of the parental Av1LacZ4 vector. Transduction of a panel of human cell lines with the chimeric and parental vectors provided evidence for a different cellular distribution of the Ad5 and **Ad3** receptors. Three cell lines (THP-1, MRC-5, and FaDu) were more efficiently transduced by the vector contg. the **Ad3 fiber** head than by the Ad5 **fiber** vector. In contrast, human coronary artery endothelial cells were transduced more readily with the vector contg. the Ad5 **fiber** than with the chimeric **fiber** vector. HeLa and human umbilical vein endothelial cells were transduced at equiv. levels compared with human diploid fibroblasts, which were refractory to transduction with both vectors. These results provide evidence for the differential expression of the Ad5 and **Ad3** receptors on human cell lines derived from clin. relevant target tissues. Furthermore, we show that exchange of the **fiber** head domain is a viable approach to the prodn. of adenovirus vectors with cell-type-selective transduction properties. It may be possible to extend this approach to the use of ligands for a range of different cellular receptors in order to target gene transfer to specific cell types at the

level of transduction.

L9 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 5
ACCESSION NUMBER: 1996:625676 CAPLUS
DOCUMENT NUMBER: 125:324827
TITLE: Comparative analysis of adenovirus fiber-cell interaction: adenovirus type 2 (Ad2) and Ad9 utilize the same cellular fiber receptor but use different binding strategies for attachment
AUTHOR(S): Roelvink, Peter W.; Kovesdi, Imre; Wickham, Thomas J.
CORPORATE SOURCE: GenVec, Inc., Rockville, MD, 20852, USA
SOURCE: J. Virol. (1996), 70(11), 7614-7621
CODEN: JOVIAM; ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have analyzed the binding of adenovirus (Ad) serotypes from subgroups B, C, and D through **fiber**-virus and **fiber**-**fiber** cross-competition expts. Since viruses in these distinct subgroups display markedly different **tropisms**, it was unexpected that the subgroup C viruses Ad2 and Ad5 and the subgroup D virus Ad9 cross-competed for the same cellular **fiber** receptor. The subgroup B serotype **Ad3** recognized a receptor distinct from the Ad2, Ad5, and Ad9 **fiber** receptor. However, despite sharing the same **fiber** receptor, Ad2 and Ad9 displayed markedly different binding characteristics that appeared to result from direct Ad9 binding to cells via .alpha.v-integrins. Unlike Ad2, Ad9 binding to many cell lines was not abrogated by competition with the **fiber** 9 knob (F9K). Ad9 binding to **fiber** receptor-deficient cells was blocked by a monoclonal antibody to .alpha.v-integrins. In contrast, Ad9 binding to .alpha.v-deficient cells that express **fiber** receptor was blocked by F9K. Transfection of an .alpha.v-integrin-deficient cell line with a plasmid that expresses .alpha.v.beta.5 resulted in Ad9 binding that was not blocked by F9K but was blocked with a combination of F9K and penton base. Apparently, the shorter length of **fiber** 9 (11 nm) relative to **fiber** 2 (37 nm) permits **fiber**-independent binding of Ad9 penton base to .alpha.v-integrins. The difference in **fiber** length may explain the different binding characteristics and tissue **tropisms** of each virus despite both utilizing the same **fiber** and penton base receptors.

L9 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:570992 CAPLUS
DOCUMENT NUMBER: 125:239610
TITLE: Generation of recombinant adenovirus vectors with modified fibers for altering viral **tropism**
AUTHOR(S): Krasnykh, Victor N.; Mikheeva, Galina V.; Douglas, Joanne T.; Curiel, David T.
CORPORATE SOURCE: Gene Therapy Program, University Alabama at Birmingham, Birmingham, AL, 35294, USA
SOURCE: J. Virol. (1996), 70(10), 6839-6846
CODEN: JOVIAM; ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To expand the utility of recombinant adenovirus vectors for therapy applications, methods to alter native viral **tropism** to achieve cell-specific transduction would be beneficial. To this end, we are pursuing genetic methods to alter the cell recognition domain of the

adenovirus fiber. To incorporate these modified fibers into mature virions, we have developed a method based on homologous DNA recombination between two plasmids. A fiber-deleted, propagation-defective rescue plasmid has been designed for recombination with a shuttle plasmid encoding a variant fiber gene. Recombination between the two plasmids results in the derivation of recombinant adenovirus contg. a fiber gene with a silent mutation. In addn., we generated an adenovirus vector contg. chimeric fibers composed of the tail and shaft domains of adenovirus serotype 5 and the knob domain of serotype 3. This modification was shown to alter the receptor recognition profile of the virus contg. variant fibers chimera. Thus, this two-plasmid system allows for the generation of adenovirus vectors contg. variant fibers. This method provides a rapid and facile means of generating fiber-modified recombinant adenoviruses. In addn., it should be possible to use this system in the development of adenovirus vectors with modified **tropism** to allow cell-specific targeting.

L9 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 6

ACCESSION NUMBER: 1996:171343 CAPLUS
DOCUMENT NUMBER: 124:228574
TITLE: Adenovirus type 5 and 7 capsid chimera: fiber replacement alters receptor **tropism** without affecting primary immune neutralization epitopes
AUTHOR(S): Gall, Jason; Kass-Eisler, Alyson; Leinwand, Leslie; Falck-Pedersen, Erik
CORPORATE SOURCE: Dep. Microbiology, Cornell Univ. College of Medicine, New York, NY, 10021, USA
SOURCE: J. Virol. (1996), 70(4), 2116-123
CODEN: JOVIAM; ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The efficient uptake of adenovirus into a target cell is a function of adenovirus capsid proteins and their interaction with the host cell. The capsid protein **fiber** mediates high-affinity attachment of adenovirus to the target cell. Although the cellular receptor(s) for adenovirus is unknown, evidence indicates that a single receptor does not function as the attachment site for each of the 49 different serotypes of adenovirus. Sequence variation of the **fiber** ligand, particularly in the C-terminal knob domain, is assocd. with serotype-specific binding specificity. Addnl., this domain of **fiber** functions as a major serotype determinant. **Fiber** involvement in cell targeting and its function as a target of the host immune response make the **fiber** gene an attractive target for manipulation, both from the perspective of adenovirus biol. and from the perspective of using adenovirus vectors for gene transfer expts. A defective chimeric adenovirus type 5 (Ad5) reporter virus was generated by replacing the Ad5 **fiber** gene with the **fiber** gene from Ad7A. The chloramphenicol acetyltransferase reporter gene was used to characterize this virus with respect to infectivity both in vitro and in vivo. Also, the role of antifiber antibody in the host neutralizing immune response to adenovirus infection was characterized. These studies demonstrate that exchange of **fiber** is a strategy that will be useful in characterizing receptor **tropism** for different serotypes of adenovirus. Addnl., the neutralizing immune response to Ad5 and **Ad7** does not differentiate between 2 viruses that differ only in their **fiber** proteins. Therefore, following a primary

adenovirus inoculation, antibodies generated against **fiber** do not constitute a significant fraction of the neutralizing antibody population.

=> d his

(FILE 'HOME' ENTERED AT 15:39:31 ON 29 MAR 2001)

FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT 15:40:27 ON 29 MAR 2001

```
L1          10 S ((ADENOVIR? NEAR3 SUBGROUP B) OR AD16 OR AD-16 OR AD 16 OR
AD
L2           2 S L1 AND (AD5)
L3           0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4           0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5         162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
FIBE
L6          84 S L5 AND AD5
L7          35 S L5 AND TROPISM
L8          14 S L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))
L9          10 DUP REM L7 (25 DUPLICATES REMOVED)
L10          5 DUP REM L8 (9 DUPLICATES REMOVED)
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=> d ibib abs l10 1-5

L10 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 1

```
ACCESSION NUMBER:        2000:799816  CAPLUS
TITLE:                   Dependence of adenovirus infectivity on length of the
                         fiber shaft domain
AUTHOR(S):               Shayakhmetov, Dmitry M.; Lieber, Andre
CORPORATE SOURCE:        Division of Medical Genetics, University of
                         Washington, Seattle, WA, 98195, USA
SOURCE:                  J. Virol. (2000), 74(22), 10274-10286
                         CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER:               American Society for Microbiology
DOCUMENT TYPE:           Journal
LANGUAGE:                English
```

AB One of the objectives in adenovirus (Ad) vector development is to target **gene delivery** to specific cell types. Major attention has been given to modification of the Ad **fiber** knob, which is thought to det. virus **tropism**. However, among the human Ad serotypes with different tissue **tropisms**, not only the knob but also the length of the **fiber** shaft domain varies significantly. In this study we attempted to delineate the role of **fiber** length in coxsackievirus-adenovirus receptor (CAR)- and non-CAR-mediated infection. A series of Ad serotype 5 (Ad5) capsid-based vectors contg. long or short **fibers** with knob domains derived from Ad5, Ad9, or **Ad35** was constructed and tested in adsorption, internalization, and transduction studies. For Ad5 or Ad9 knob-possessing vectors, a long-shafted **fiber** was crit. for efficient adsorption/internalization and transduction of CAR/.alpha.v integrin-expressing cells. Ad5 capids contg. short CAR-recognizing **fibers** were affected in cell adsorption and infection. In contrast, for the chimeric vectors possessing **Ad35** knobs, which enter cells by a CAR/.alpha.v integrin-independent pathway, **fiber** shaft length had no significant influence on binding or infectibility on tested cells. The weak attachment of short-shafted Ad5 or Ad9

knob-possessing vectors seems to be causally assocd. with a charge-dependent repulsion between Ad5 capsid and acidic cell surface proteins. The differences between short- and long-shafted vectors in attachment or infection were abrogated by preincubation of cells with polycations. This study demonstrates that the **fiber**-CAR interaction is not the sole determinant for **tropism** of Ad vectors contg. chimeric **fibers**. CAR- and .alpha.v integrin-mediated infections are influenced by other factors, including the length of the **fiber** shaft.

REFERENCE COUNT: 73
REFERENCE(S):
(1) Arcasoy, S; Am J Respir Cell Mol Biol 1997, V17, P422 CAPLUS
(2) Arnberg, N; J Virol 2000, V74, P42 CAPLUS
(3) Arnberg, N; Virology 1997, V227, P239 CAPLUS
(4) Bai, M; J Virol 1993, V67, P5198 CAPLUS
(5) Bailey, A; Virology 1994, V205, P438 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 2
ACCESSION NUMBER: 2000:154173 CAPLUS
DOCUMENT NUMBER: 132:343901
TITLE: Efficient gene transfer into human CD34+ cells by a retargeted adenovirus vector
AUTHOR(S): Shayakhmetov, Dmitry M.; Papayannopoulou, Thalia; Stamatoyannopoulos, George; Lieber, Andre
CORPORATE SOURCE: Division of Medical Genetics, Department of Medicine, University of Washington, Seattle, WA, 98195, USA
SOURCE: J. Virol. (2000), 74(6), 2567-2583
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Efficient infection with adenovirus (Ad) vectors based on serotype 5 (Ad5) requires the presence of coxsackievirus-adenovirus receptors (CAR) and .alpha.v integrins on cells. The paucity of these cellular receptors is thought to be a limiting factor for Ad gene transfer into hematopoietic stem cells. In a systematic approach, we screened different Ad serotypes for interaction with noncycling human CD34+ cells and K562 cells on the level of virus attachment, internalization, and replication. From these studies, serotype 35 emerged as the variant with the highest **tropism** for CD34+ cells. A chimeric vector (Ad5GFP/F35) was generated which contained the short-shafted **Ad35 fiber** incorporated into an Ad5 capsid. This substitution was sufficient to transplant all infection properties from **Ad35** to the chimeric vector. The retargeted, chimeric vector attached to a receptor different from CAR and entered cells by an .alpha.v integrin-independent pathway. In transduction studies, Ad5GFP/F35 expressed green fluorescent protein (GFP) in 54% of CD34+ cells. In comparison, the std. Ad5GFP vector conferred GFP expression to only 25% of CD34+ cells. Importantly, Ad5GFP transduction, but not Ad5GFP/F35, was restricted to a specific subset of CD34+ cells expressing .alpha.v integrins. The actual transduction efficiency was even higher than 50% because Ad5GFP/F35 viral genomes were found in GFP-neg. CD34+ cell fractions, indicating that the cytomegalovirus promoter used for transgene expression was not active in all transduced cells. The chimeric vector allowed for gene transfer into a broader spectrum of CD34+ cells, including subsets with potential stem cell capacity. Fifty-five percent of CD34+ c-Kit+ cells expressed GFP

after infection with Ad5GFP/F35, whereas only 13% of CD34+ c-Kit+ cells were GFP pos. after infection with Ad5GFP. These findings represent the basis for studies aimed toward stable gene transfer into hematopoietic stem cells.

REFERENCE COUNT: 82

REFERENCE(S):
(1) Bailey, A; Virology 1994, V205, P438 CAPLUS
(2) Becker, P; Exp Hematol 1999, V27, P533 CAPLUS
(3) Bergelson, J; Science 1997, V275, P1320 CAPLUS
(4) Bodine, D; Blood 1993, V82, P1975 CAPLUS
(5) Bregni, M; Gene Ther 1998, V5, P465 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 3

ACCESSION NUMBER: 2000:4864 CAPLUS
DOCUMENT NUMBER: 132:147352
TITLE: Adenovirus vector pseudotyping in fiber-expressing cell lines: improved transduction of Epstein-Barr virus-transformed B cells
AUTHOR(S): Von Seggern, Dan J.; Huang, Shuang; Fleck, Shonna Kaye; Stevenson, Susan C.; Nemerow, Glen R.
CORPORATE SOURCE: Department of Immunology, Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: J. Virol. (2000), 74(1), 354-362
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB While adenovirus (Ad) **gene delivery** vectors are useful in many **gene therapy** applications, their broad **tropism** means that they cannot be directed to a specific target cell. There are also a no. of cell types involved in human disease which are not transducible with std. Ad vectors, such as Epstein-Barr virus (EBV)-transformed B lymphocytes. Adenovirus binds to host cells via the viral **fiber** protein, and Ad vectors have previously been retargeted by modifying the **fiber** gene on the viral chromosome. This requires that the modified **fiber** be able to bind to the cell in which the vector is grown, which prevents truly specific vector targeting. We previously reported a **gene delivery** system based on a **fiber** gene-deleted Ad type 5 (Ad5) vector (Ad5..beta.gal..DELTA.F) and packaging cells that express the viral **fiber** protein. Expression of different **fibers** in packaging cells will allow Ad retargeting without modifying the viral chromosome. Importantly, **fiber** proteins which can no longer bind to the producer cells can also be used. Using this approach, we generated for the first time pseudotyped Ad5..beta.gal..DELTA.F particles contg. either the wild-type Ad5 **fiber** protein or a chimeric **fiber** with the receptor-binding knob domain of the **Ad3** **fiber**. Particles equipped with the chimeric **fiber** bound to the **Ad3** receptor rather than the coxsackievirus-adenovirus receptor protein used by Ad5. EBV-transformed B lymphocytes were infected efficiently by the **Ad3**-pseudotyped particles but poorly by virus contg. the Ad5 **fiber** protein. The strategy described here represents a broadly applicable method for targeting **gene delivery** to specific cell types.

REFERENCE COUNT: 60

REFERENCE(S):
(2) Bergelson, J; Biochem Pharmacol 1999, V57, P975 CAPLUS

(3) Bergelson, J; Science 1997, V275, P1320 CAPLUS
(4) Chee-Sheung, C; J Virol 1982, V42, P932 CAPLUS
(6) Defer, C; J Virol 1990, V64, P3661 CAPLUS
(7) Dmitriev, I; J Virol 1998, V72, P9706 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 5 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:790795 SCISEARCH
THE GENUINE ARTICLE: 244VJ
TITLE: Mutations in the DG loop of adenovirus type 5 fiber knob protein abolish high-affinity binding to its cellular receptor CAR
AUTHOR: Kirby I; Davison E; Beavil A J; Soh C P C; Wickham T J; Roelvink P W; Kovesdi I; Sutton B J; Santis G (Reprint)
CORPORATE SOURCE: GUYS HOSP, GUYS KINGS COLL & ST THOMAS HOSP SCH MED, DEPT RESP MED & ALLERGY, THOMAS GUY HOUSE, LONDON SE1 9RT, ENGLAND (Reprint); GUYS HOSP, GUYS KINGS COLL & ST THOMAS HOSP SCH MED, DEPT RESP MED & ALLERGY, LONDON SE1 9RT, ENGLAND; UNIV LONDON KINGS COLL, RANDALL INST, LONDON WC2B 5RL, ENGLAND; GENVEC INC, ROCKVILLE, MD 20852
COUNTRY OF AUTHOR: ENGLAND; USA
SOURCE: JOURNAL OF VIROLOGY, (NOV 1999) Vol. 73, No. 11, pp. 9508-9514.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0022-538X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 41

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The amino acid residues in adenovirus type 5 (Ad5) **fiber** that interact with its cellular receptor, the coxsackie PS virus and Ad receptor (CAR), have not been defined, To investigate this, multiple mutations were constructed in the region between residues 479 and 497 in Ad5 **fiber** (beta-strands E and F and the adjacent region of the DG loop). The effects of these mutations on binding to CAR were determined by use of cell-binding competition experiments, surface plasmon resonance, and direct binding studies. The mutation effects on the overall folding and secondary structure of the protein were assessed by circular dichroism (CD) spectroscopy. Deletions of two consecutive amino acids between residues 485 and 493 abolished high-affinity binding to CAR; the CD spectra indicated that although there was no disruption of the overall folding and secondary structure of the protein, local conformational changes did occur. Moreover, single site mutations in this region of residues with exposed, surface-accessible side chains, such as Thr492, Asn493, and Val495, had no effect on receptor binding, which demonstrates that these residues are not in contact with CAR themselves. This implies the involvement of residues in neighboring loop regions. Replacement of the segment containing the two very short beta-strands E and F and the turn between them (residues 479 to 486) with the corresponding sequence from **Ad3** (beta EFAd3 --> 5 mutation) resulted in the loss of receptor binding. The identical CD spectra for beta EFAd3 --> 5 and wild-type proteins suggest that these substitutions caused no

conformational rearrangement and that the loss of binding may thus be due to the substitution of one or more critical contact residues. These findings have implications for our understanding of the interaction of Ad5 **fiber** with CAR and for the construction of targeted recombinant Ad5 vectors for **gene therapy** purposes.

L10 ANSWER 5 OF 5 BIOTECHDS COPYRIGHT 2001 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1997-07591 BIOTECHDS
TITLE: Selective targeting of human cells by a chimeric adeno virus vector containing a modified fiber protein; for receptor-mediated gene transfer and **gene therapy**
AUTHOR: Stevenson S C; Rollence M; Marshall-Neff J; *McClelland A
CORPORATE SOURCE: Genet.Ther.
LOCATION: Department of Molecular and Cell Biology, Genetic Therapy, Inc., 938 Clopper Road, Gaithersburg, MD 20878, USA.
Email: alan.mcclelland@pharma.novartis.com
SOURCE: J.Virol.; (1997) 71, 6, 4782-90
CODEN: JOVIAM
ISSN: 0022-538X
DOCUMENT TYPE: Journal
LANGUAGE: English
AN 1997-07591 BIOTECHDS
AB A chimeric **fiber** protein cDNA, with an adeno virus-3 (**Ad3**) **fiber** head domain fused to an Ad5 **fiber** tail and shaft, was incorporated into an Ad genome with E1 and E3 deleted and a beta-galactosidase (EC-3.2.1.23) reporter gene, to generate Av9LacZ4. Western blotting confirmed **fiber** protein expression and association with the Ad capsid. Altered receptor **tropism** and a of the chimeric **fiber** vector was observed by transduction with **fiber** protein competitors. THP-1, MRC-5 and FaDu cells were more efficiently transduced by the **Ad3 fiber** vector than by an Ad5 **fiber** vector. Human coronary artery endothelium cells were transduce more readily with an A5 **fiber** vector than the chimeric **fiber** vector. HeLa and HUVEC cells were transduced at equivalent levels, compared with human diploid fibroblasts, which were refractory to transduction with both vectors. Results indicated that **fiber** head domain exchange is a viable approach to production of Ad vectors with cell-type-selective transduction properties. This approach may be extended to receptor ligand gene transfer, to target a range of different cellular receptors. (26 ref)

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LEFT TRUNCATION IGNORED FOR '?ADBAMR?' FOR FILE 'BIOTECHDS'
L11 3 ?ADBAMR?
Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words,

for example, the Basic Index.

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To specify a variable character within a word use '!', e.g., 'wom!n'
to search for both 'woman' and 'women'.  Enter "HELP TRUNCATION" at an
arrow prompt (=>) for more information.

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AD
L2            2 S L1 AND (AD5)
L3            0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4            0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5          162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
FIBE
L6           84 S L5 AND AD5
L7           35 S L5 AND TROPISM
L8           14 S L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))
L9           10 DUP REM L7 (25 DUPLICATES REMOVED)
L10           5 DUP REM L8 (9 DUPLICATES REMOVED)
L11           3 S ?ADBAMR?
L12           0 S PBR/ADBAMR?
L13           0 S PBR!ADBAMR?

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L11  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:         2000:628291  CAPLUS
DOCUMENT NUMBER:          133:218512
TITLE:                    Adenoviral vectors with low antigenicity for delivery
                          of nucleic acids to synoviocytes for the gene therapy
                          of rheumatoid arthritis
INVENTOR(S):              Vogels, Ronald; Schouten, Govert Johan; Bout, Abraham
PATENT ASSIGNEE(S):       Introgene B.V., Neth.
```

SOURCE: PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052186	A1	20000908	WO 2000-NL133	20000303

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 1999-200624 19990304

AB The invention provides a nucleic acid delivery vehicle with or having been provided with at least a tissue tropism for fibroblast-like or macrophage-like cells, preferably synoviocytes. In one aspect said nucleic acid delivery vehicle is a virus capsid or a functional part, deriv. and/or analog thereof. Preferably said virus capsid is an adenovirus capsid. Preferably said adenovirus is a subgroup B adenovirus, preferably adenovirus 16. Preferably said tissue tropism is provided by at least a tissue tropism detg. part of an adenovirus fiber protein or a functional deriv. and/or analog thereof. The invention further presents methods for the treatment of diseases, preferably joint related diseases.

REFERENCE COUNT: 8
REFERENCE(S): (1) Abrahamsen, K; J VIROL 1997, V71(11), P8946 CAPLUS
(2) Denefle, P; WO 9605321 A 1996 CAPLUS
(3) Fallaux, F; HUM GENE THER 1998, V9, P1909 CAPLUS
(4) Gall, J; J VIROL 1996, V70(4), P2116 CAPLUS
(5) Genvec Inc; WO 9626281 A 1996 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 3 BIOTECHDS COPYRIGHT 2001 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-00248 BIOTECHDS
TITLE: Nucleic acid vectors having a tissue tropism for fibroblast-like or macrophage-like synoviocytes, useful for transferring foreign genes and for treating rheumatoid arthritis and ankylosing spondylitis;
adeno virus vector preparation, vector-mediated gene transfer and expression in host cell for disease gene therapy
AUTHOR: Vogels R; Schouten G J; Bout A
PATENT ASSIGNEE: Introgene
LOCATION: Leiden, The Netherlands.
PATENT INFO: WO 2000052186 8 Sep 2000
APPLICATION INFO: WO 2000-EP133 3 Mar 2000
PRIORITY INFO: EP 990200624 4 Mar 1999
DOCUMENT TYPE: Patent
LANGUAGE: English

OTHER SOURCE: WPI: 2000-594186 [56]
AN 2001-00248 BIOTECHDS
AB A DNA vector (I) having a tissue tropism for fibroblast-like or macrophage-like synoviocytes, is claimed. Also claimed are: production of an adeno virus fiber protein for the assembly of the vector, where the fiber protein contains a tissue tropism determining part of a subgroup-B adeno virus serotype 11, 16, 35 and/or 51 adeno virus fiber protein, or its derivative or analog; a cell for the production of (I) which is derived from a PER.C6 cell (ECACC 96022940); constructs, plasmid pBr/Ad.BamR-delta-fib, plasmid pBr/**AdBamRfib16** or plasmid pBr/**AdBamR**.pac/fib16 containing an adeno virus 16 bp part of a fiber of adeno virus-16 or a unique PacI-site in the proximity of the adeno virus-5 right terminal repeat, in the non-adeno virus sequence backbone of the construct; and a construct, plasmid pWe/Ad.Af1IIrrITRfib16 containing adeno virus-5 sequences 3,534-22,443 and 32,794-35,938, and adeno virus 16 DNA encoding at least part of a fiber protein of adeno virus-16. The above DNA vector system is useful in rheumatoid arthritis and ankylosing spondylitis gene therapy. (133pp)

L11 ANSWER 3 OF 3 BIOTECHDS COPYRIGHT 2001 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-10742 BIOTECHDS
TITLE: Gene delivery vehicle useful in the treatment of e.g. cardiovascular disease comprises at least a tissue tropism for smooth muscle or endothelial cells;
plasmid construction for heart and lung disease gene therapy
AUTHOR: Havenga M J E; Bout A; Vogels R
PATENT ASSIGNEE: Introgene
LOCATION: Leiden, The Netherlands.
PATENT INFO: WO 2000031285 2 Jun 2000
APPLICATION INFO: WO 1999-NL717 22 Nov 1999
PRIORITY INFO: EP 1998-203921 20 Nov 1998
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2000-400090 [34]
AN 2000-10742 BIOTECHDS
AB A gene delivery vehicle (I, from PER.C6 ECACC96022940 cells) using at least a tissue tropism for smooth muscle or endothelial cells, is claimed. Also claimed sre: a cell capable of producing (I); constuct plasmid pBr/Ad.BamR-delta-Fib (II) with adeno virus-5 sequences 21,562-31,094 bp and 32,794- 35,938 bp; construct plasmid pBr/**AdBamR**.pac/fib16 (III) with (II) and an adeno virus 16 gene encoding fiber protein; construct plasmid pBr/**AdBamRfib16** with (III) and a unique PacI site in the adeno virus-5 right terminal repeat, in the non-adeno virus sequence backbone of the construct; construct plasmid pWE/Ad.Af1IIrITRfib16 with adeno virus-5 sequences 3,534-31,094 bp and 32,794-35,938 bp and an adeno virus-16 gene encoding fiber protein; and construct plasmid pWE/Ad.Af1IIrITRDE2Afib16 with adeno virus-5 sequences 3,534-22,443 bp, 24,033-31,094 bp and 32,794-35,938 bp and an adeno virus-16 gene encoding fiber protein. The vehicle is useful for the delivery of a nucleic acid to smooth muscle or endothelial cells for the treatment of cardiovascular disease. The constructs are useful for generating a vehicle capable of delivering nucleic acids to target cells. (80pp)

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L14          3 ?AFLIIR?
Left truncation is not valid in the specified search field in the
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L3            0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4            0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5          162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
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L11           3 S ?ADBAMR?
L12           0 S PBR/ADBAMR?
L13           0 S PBR!ADBAMR?
L14           3 S ?AFLIIR?

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FULL ESTIMATED COST                                   171.83     172.13

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CA SUBSCRIBER PRICE                                   0.00     -10.58

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L2             2 S L1 AND (AD5)
L3             0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4             0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5           162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
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L7            35 S L5 AND TROPISM
L8            14 S L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))
L9            10 DUP REM L7 (25 DUPLICATES REMOVED)
L10            5 DUP REM L8 (9 DUPLICATES REMOVED)
L11            3 S ?ADBAMR?
L12            0 S PBR/ADBAMR?
L13            0 S PBR!ADBAMR?
L14            3 S ?AFLIIR?

     FILE 'STNGUIDE' ENTERED AT 16:13:44 ON 29 MAR 2001

     FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT
     16:14:06 ON 29 MAR 2001

=> FIL STNGUIDE
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   4.39     176.52

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
```

```
                                                          ENTRY     SESSION
CA SUBSCRIBER PRICE                                        0.00      -10.58

FILE 'STNGUIDE' ENTERED AT 16:18:16 ON 29 MAR 2001
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2001 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Mar 23, 2001 (20010323/UP).

=>  SET SMA OFF

SET COMMAND COMPLETED

=>  SEL RAN.CAPLUS(1) L9 2

L9 WAS CREATED DURING MULTIFILE PROCESSING AND CANNOT BE USED WHEN CREATING
E#S
Enter SET SMARTSELECT ON before using SELECT to create an L-number of
terms extracted from an L-number that contains answers or terms from
more than one file.  SET SMARTSELECT ON must be entered before you
execute the SELECT command.

=>  SET SMA ON

SET COMMAND COMPLETED

=>  SEL RAN.CAPLUS(1) L9 2


   SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details

NO ANSWERS SELECTED.
THE ANSWER SET WAS CREATED IN FILES 'CAPLUS, BIOSIS, SCISEARCH'.
USE THE FILE COMMAND TO CHANGE TO THE CORRECT FILES.
To use the SELECT command, you must be in the same file environment
in which the answer set was created.

=>

=>  FIL biosis

COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.00     176.52

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00      -10.58

FILE 'BIOSIS' ENTERED AT 16:24:11 ON 29 MAR 2001
COPYRIGHT (C) 2001 BIOSIS(R)

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
```

FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 28 March 2001 (20010328/ED)

The BIOSIS file has been reloaded. Enter HELP RLOAD and HELP REINDEXING for details.

=> SEL RAN.CAPLUS(1) L9 2

SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details

NO ANSWERS SELECTED.
THE ANSWER SET WAS CREATED IN FILES 'CAPLUS, BIOSIS, SCISEARCH'.
USE THE FILE COMMAND TO CHANGE TO THE CORRECT FILES.
To use the SELECT command, you must be in the same file environment in which the answer set was created.

=> SET SMA OFF

SET COMMAND COMPLETED

=> SEL RAN.CAPLUS(1) L10 2

L10 WAS CREATED DURING MULTIFILE PROCESSING AND CANNOT BE USED WHEN CREATING E#S
Enter SET SMARTSELECT ON before using SELECT to create an L-number of terms extracted from an L-number that contains answers or terms from more than one file. SET SMARTSELECT ON must be entered before you execute the SELECT command.

=> SET SMA ON

SET COMMAND COMPLETED

=> SEL RAN.CAPLUS(1) L10 2

SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details

NO ANSWERS SELECTED.
THE ANSWER SET WAS CREATED IN FILES 'CAPLUS, BIOTECHDS, SCISEARCH'.
USE THE FILE COMMAND TO CHANGE TO THE CORRECT FILES.
To use the SELECT command, you must be in the same file environment in which the answer set was created.

=>

=> SET SMA OFF

SET COMMAND COMPLETED

=> SEL RAN.CAPLUS(1) L9 2

L9 WAS CREATED DURING MULTIFILE PROCESSING AND CANNOT BE USED WHEN CREATING E#S
Enter SET SMARTSELECT ON before using SELECT to create an L-number of terms extracted from an L-number that contains answers or terms from more than one file. SET SMARTSELECT ON must be entered before you execute the SELECT command.

=> SET SMA ON

SET COMMAND COMPLETED

=> SEL RAN.CAPLUS(1) L9 2

SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details

NO ANSWERS SELECTED.
THE ANSWER SET WAS CREATED IN FILES 'CAPLUS, BIOSIS, SCISEARCH'.
USE THE FILE COMMAND TO CHANGE TO THE CORRECT FILES.
To use the SELECT command, you must be in the same file environment in which the answer set was created.

=>

=> FIL caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.22	178.74

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-10.58

FILE 'CAPLUS' ENTERED AT 16:26:01 ON 29 MAR 2001

FILE COVERS 1967 - 29 Mar 2001 VOL 134 ISS 14
FILE LAST UPDATED: 28 Mar 2001 (20010328/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGlstRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

Now you can extend your author, patent assignee, patent information,

and title searches back to 1907. The records from 1907-1966 now have this searchable data in CAOLD. You now have electronic access to all of CA: 1907 to 1966 in CAOLD and 1967 to the present in CAPLUS on STN.

The CA Lexicon is now available in the Controlled Term (/CT) field. Enter HELP LEXICON for full details.

Attention, the CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

=> SEL RAN.CAPLUS(1) L9 2

SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details

NO ANSWERS SELECTED.
THE ANSWER SET WAS CREATED IN FILES 'CAPLUS, BIOSIS, SCISEARCH'.
USE THE FILE COMMAND TO CHANGE TO THE CORRECT FILES.
To use the SELECT command, you must be in the same file environment
in which the answer set was created.

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.98	179.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-10.58

FILE 'STNGUIDE' ENTERED AT 16:27:51 ON 29 MAR 2001
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Mar 23, 2001 (20010323/UP).

=> d his

(FILE 'HOME' ENTERED AT 15:39:31 ON 29 MAR 2001)

FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT 15:40:27 ON 29 MAR 2001

```
L1           10 S ((ADENOVIR? NEAR3 SUBGROUP B) OR AD16 OR AD-16 OR AD 16 OR..
AD
L2            2 S L1 AND (AD5)
L3            0 S (ADENOVIR? NEAR3 SUBGROUP B) (L) FIBER
L4            0 S (ADENOVIR? NEAR5 B) (L) FIBER
L5          162 S (AD3 OR AD7 OR AD11 OR AD14 OR AD21 OR AD34 OR AD35) (L)
FIBE
L6           84 S L5 AND AD5
L7           35 S L5 AND TROPISM
```

```
L8          14 S L7 AND ((GENE (2W) DELIVERY) OR (GEN? THERAP?))
L9          10 DUP REM L7 (25 DUPLICATES REMOVED)
L10          5 DUP REM L8 (9 DUPLICATES REMOVED)
L11          3 S ?ADBAMR?
L12          0 S PBR/ADBAMR?
L13          0 S PBR!ADBAMR?
L14          3 S ?AFLIIR?

     FILE 'STNGUIDE' ENTERED AT 16:13:44 ON 29 MAR 2001

     FILE 'CAPLUS, BIOSIS, MEDLINE, BIOTECHDS, EMBASE, SCISEARCH' ENTERED AT
     16:14:06 ON 29 MAR 2001

     FILE 'STNGUIDE' ENTERED AT 16:18:16 ON 29 MAR 2001
               SET SMA OFF
               SET SMA ON

     FILE 'BIOSIS' ENTERED AT 16:24:11 ON 29 MAR 2001
               SET SMA OFF
               SET SMA ON
               SET SMA OFF
               SET SMA ON

     FILE 'CAPLUS' ENTERED AT 16:26:01 ON 29 MAR 2001

     FILE 'STNGUIDE' ENTERED AT 16:27:51 ON 29 MAR 2001
```

L13 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2000 ACS
AN 1999:269740 CAPLUS
DN 131:68011
TI Expression of the primary coxsackie and **adenovirus** receptor is downregulated during skeletal muscle maturation and limits the efficacy of
adenovirus-mediated gene delivery to muscle cells
AU Nalbantoglu, Josephine; Pari, Giovanna; Karpati, George; Holland, Paul C.
CS Department of Neurology and Neurosurgery, Division of Molecular Medicine, Department of Pediatrics, McGill University, Montreal, PQ, H3A 2B4, Can.
SO Hum. Gene Ther. (1999), 10(6), 1009-1019
CODEN: HGTHE3; ISSN: 1043-0342
PB Mary Ann Liebert, Inc.
DT Journal
LA English
RE.CNT 31
RE
(2) Acsadi, G; Hum Gene Ther 1996, V7, P129 CAPLUS
(3) Acsadi, G; Hum Mol Genet 1994, V3, P579 CAPLUS
(4) Bergelson, J; J Virol 1998, V72, P415 CAPLUS
(5) Bergelson, J; Science 1997, V275, P1320 CAPLUS
(6) Blaschuk, K; Dev Biol 1994, V164, P475 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2000 ACS
AN 1998:640334 CAPLUS
DN 129:255990
TI **Adenoviral** vectors with **chimeric** fiber proteins for altered cell **tropism** as well as vector purification
IN Curiel, David T.; Krasnykh, Victor; Dimitriev, Igor
PA UAB Research Foundation, USA
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9841618	A1	19980924	WO 1998-US3879	19980313
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9864429	A1	19981012	AU 1998-64429	19980313
PRAI	US 1997-40703		19970314		
	US 1997-54112		19970729		
	WO 1998-US3879		19980313		

L13 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2000 ACS
AN 1998:169418 CAPLUS
DN 128:227084
TI Methods and compositions for liver-specific delivery of therapeutic molecules using recombinant adeno-associated virus vectors
IN Srivastava, Aron; Ponnazhagan, Selvarangan; Chloemer, Robert H.; Wang, Xu-Shan; Yoder, Mervin C.; Zhou, Shang-Zhen; Escobedo, Jaime; Dwarki, Varavani

PA Chiron Corporation, USA; Indiana University
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9809524	A1	19980312	WO 1997-US15453	19970902
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 933997	A1	19990811	EP 1997-940762	19970902
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

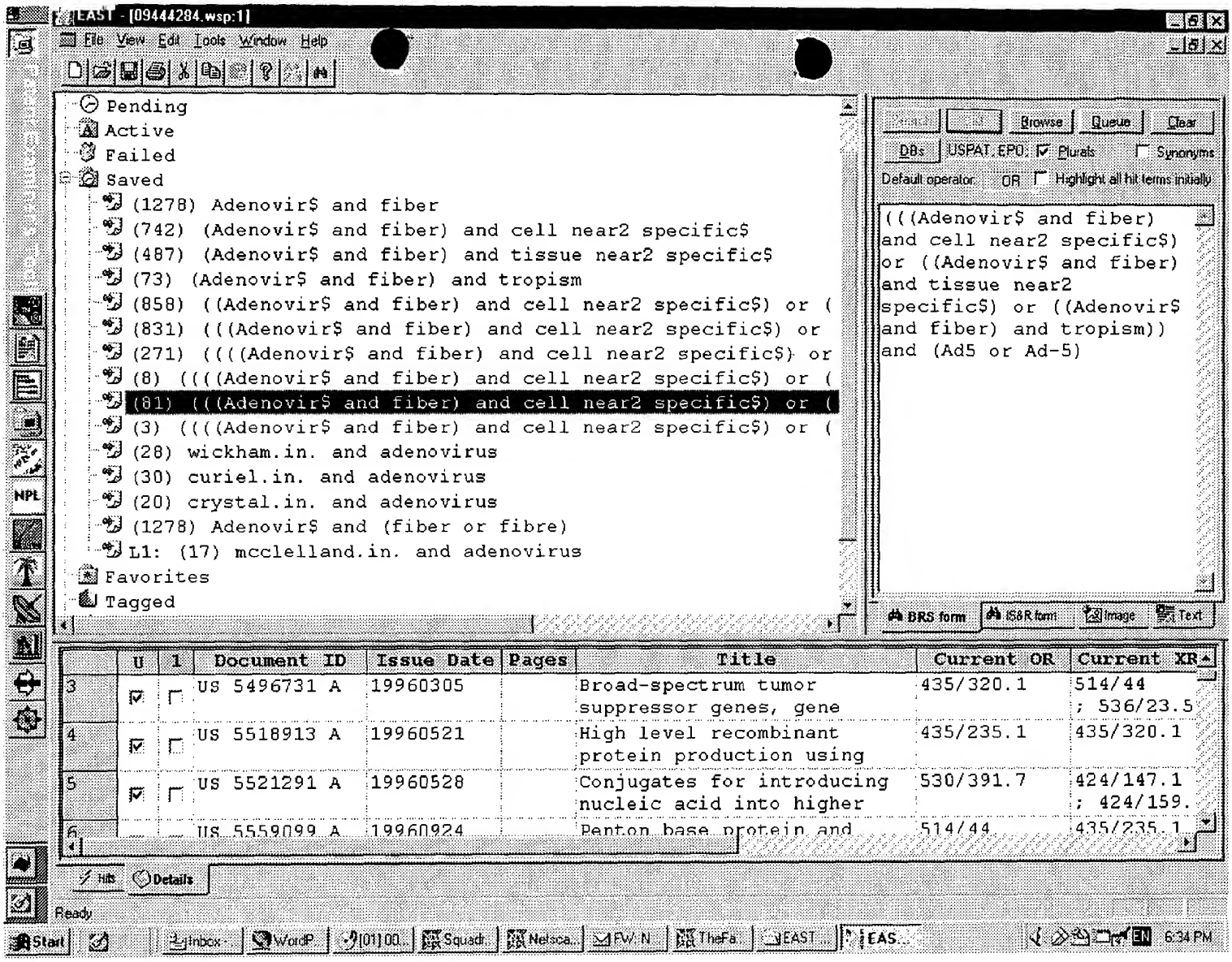
PRAI US 1996-25616 19960906
US 1996-25649 19960911

L13 ANSWER 10 OF 15 MEDLINE DUPLICATE 4
AN 1998001338 MEDLINE
DN 98001338
TI Increased in vitro and in vivo gene transfer by **adenovirus** vectors containing **chimeric** fiber proteins.
AU Wickham T J; Tzeng E; Shears L L 2nd; Roelvink P W; Li Y; Lee G M; Brough D E; Lizonova A; Kovesdi I
CS GenVec, Inc., Rockville, Maryland 20852, USA.
SO JOURNAL OF VIROLOGY, (1997 Nov) 71 (11) 8221-9.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199801
EW 19980104

L13 ANSWER 11 OF 15 MEDLINE DUPLICATE 5
AN 97296288 MEDLINE
DN 97296288
TI Selective targeting of human cells by a **chimeric** **adenovirus** vector containing a modified fiber protein.
AU Stevenson S C; Rollence M; Marshall-Neff J; McClelland A
CS Department of Molecular and Cell Biology, Genetic Therapy, Inc., Gaithersburg, Maryland 20878, USA.
SO JOURNAL OF VIROLOGY, (1997 Jun) 71 (6) 4782-90.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199708
EW 19970802

L13 ANSWER 12 OF 15 MEDLINE
AN 97413199 MEDLINE
DN 97413199
TI Strategies to accomplish targeted gene delivery to muscle cells employing **tropism**-modified **adenoviral** vectors.
AU Douglas J T; Curiel D T
CS Gene Therapy Program, University of Alabama at Birmingham 35294-3300, USA.
NC R01 5025505
SO NEUROMUSCULAR DISORDERS, (1997 Jul) 7 (5) 284-98. Ref: 98
Journal code: BJS. ISSN: 0960-8966.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199712
EW 19971202

L13 ANSWER 13 OF 15 MEDLINE DUPLICATE 6
AN 96386575 MEDLINE
DN 96386575
TI Generation of recombinant **adenovirus** vectors with modified fibers for altering viral **tropism**.
AU Krasnykh V N; Mikheeva G V; Douglas J T; Curiel D T


EAST - [09444284.wsp:1]
File View Edit Tools Window Help
Pending
Active
Failed
Saved
(1278) Adenovir$ and fiber
(742) (Adenovir$ and fiber) and cell near2 specific$
(487) (Adenovir$ and fiber) and tissue near2 specific$
(73) (Adenovir$ and fiber) and tropism
(858) ((Adenovir$ and fiber) and cell near2 specific$) or (
(831) (((Adenovir$ and fiber) and cell near2 specific$) or
(271) ((((Adenovir$ and fiber) and cell near2 specific$) or
(8) ((((Adenovir$ and fiber) and cell near2 specific$) or (
(81) (((Adenovir$ and fiber) and cell near2 specific$) or (
(3) ((((Adenovir$ and fiber) and cell near2 specific$) or (
(28) wickham.in. and adenovirus
(30) curiel.in. and adenovirus
(20) crystal.in. and adenovirus
(1278) Adenovir$ and (fiber or fibre)
L1: (17) mcclelland.in. and adenovirus
Favorites
Tagged
Browse
Queue
Clear
DBs
USPAT,EPO;
Plurals
Synonyms
Default operator:
OR
Highlight all hit terms initially
(((Adenovir$ and fiber) and cell near2 specific$) or ((Adenovir$ and fiber) and tissue near2 specific$) or ((Adenovir$ and fiber) and tropism)) and (Ad5 or Ad-5)
BRS form
IS&R form
Image
Text
U
1
Document ID
Issue Date
Pages
Title
Current OR
Current XR
3
US 5496731 A
19960305
Broad-spectrum tumor suppressor genes, gene
435/320.1
514/44 ; 536/23.5
4
US 5518913 A
19960521
High level recombinant protein production using
435/235.1
435/320.1
5
US 5521291 A
19960528
Conjugates for introducing nucleic acid into higher
530/391.7
424/147.1 ; 424/159.
6
US 5559099 A
19960924
Penton base protein and
514/44
435/235.1
Hits
Details
Ready
Start
Inbox
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Squadr
Netsca
FW: N
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EAS
EN
6:34 PM

US 094442840AP1

Creation date: 09-09-2003
Indexing Officer: SKEE - STANLEY KEE
Team: OIPEBackFileIndexing
Dossier: 09444284

Legal Date: 04-08-2001

No.	Doccode	Number of pages
1	SRNT	11

Total number of pages: 11

Remarks:

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